EPA Comments on the West Virginia
Draft Phase I Watershed Implementation Plan

September 29, 2010

This document provides the West Virginia Department of Environmental Protection (DEP) with the results of the U.S. Environmental Protection Agency's (EPA) evaluation of West Virginia's draft Phase I Watershed Implementation Plan (WIP). The document expands upon the conference call between DEP and EPA staff on September 20, 2010 and the letter and WIP Evaluation Fact Sheet that Regional Administrator Shawn Garvin sent to Secretary Huffman on September 24. This enclosure describes in more detail EPA's key areas of concern and ways West Virginia can improve the Phase I WIP. It is anticipated that this enclosure coupled with subsequent meetings and calls among EPA and DEP staff will provide sufficient detail for West Virginia to improve its final WIP due to EPA on November 29, 2010, and the Phase II WIP in 2011. EPA looks forward to the conference call with DEP on September 30 to continue this dialogue and the scheduling of subsequent calls or meetings as needed to assist the state in this process. EPA also looks forward to reviewing revised WIP scenario runs starting as early as this week.

Section I. Overview of the WIP

EPA would like to recognize the efforts of the West Virginia WIP Development Team over the past several months in working to complete the draft Phase I WIP. EPA is ready to continue to work with the West Virginia WIP team to finalize the Phase I WIP.

When reviewing each of the seven Bay jurisdictions' draft WIP submissions, EPA evaluated whether the allocations assigned by the jurisdiction met the July 1 and August 13 nutrient and sediment allocations; whether the jurisdiction provided assurance that the strategies outlined in the WIP will achieve and maintain the wasteload and load allocations; and whether there is sufficient information for permit writers to develop permits that meet the wasteload allocation in the TMDL. These are three critical areas each jurisdiction's WIP must address. Overall, the West Virginia draft Phase I WIP needs considerable strengthening to meet the expectations previously outlined in EPA correspondence for the WIPs and to allow it to form the main basis for the Chesapeake Bay TMDL wasteload and load allocations.

Starting with the numbers, West Virginia's WIP input deck submitted September 3 exceeded the state's nitrogen allocation by 18% and sediment allocation by 38% even with the additional nutrient and sediment controls for agriculture and construction. West Virginia did meet its phosphorus allocation, and EPA is willing to work with DEP over the next 2 months to assess whether West Virginia could exchange nitrogen and phosphorus without further increasing sediment loads and/or contributing to downstream water quality impairments

Shifting to the gap-filling strategies, the draft WIP did not provide assurance that the programs identified would result in practices in place by 2017 that would achieve 60% of the nutrient and sediment reductions necessary to meet TMDL allocations. The gap-filling strategies for

agriculture and stormwater, for instance, rely on existing, largely voluntary programs with little discussion of specific means to increase participation levels. For the most part, the WIP does not propose how WV proposes to secure additional resources such as increased funding or staffing levels. EPA expects specific milestones for these program-building activities so that it can assess progress over time.

On the positive side, West Virginia Department of Agriculture (WVDA) is planning to use its Chesapeake Bay Regulatory and Accountability (CBRAP) grant to employ a CAFO specialist, a tracking and reporting specialist and a WIP coordinator to expedite the development and implementation of the West Virginia implementation plan. EPA encourages the state to continue to explore how increased funds from the CBRAP and other grant programs could be used to fill key gaps in regulatory programs.

Since the final WIP input deck did not meet the July 1 and August 13 nutrient and sediment allocations, EPA proposed high level backstop allocations in the draft TMDL released September 24. EPA looks forward to removing or relaxing these backstop allocations in the final TMDL if the final Phase I WIP addresses the deficiencies described in the remainder of this document.

Section II. Addressing Sector Area Concerns and Opportunities for Improvement

Agriculture – Serious Deficiencies in Gap-Filling Strategies

Strengths
The agriculture section of the West Virginia WIP contained some provisions that are worth highlighting. First, the WIP does a nice job calling out enhanced nutrient management approaches that will significantly reduce nutrients, such as soil sampling, variable rate applications, nitrogen evaluation for corn, split application for corn, litter transport, buffers, cover crops and feed management. The WIP also identifies recent increases in staff, including 60 nutrient management planners that are available throughout the state and several full time nutrient managers in the Potomac Headwaters region. The WIP showcases West Virginia's ability to successfully partner with other agencies and organizations to provide necessary incentives and technical assistance to producers; these partnerships will continue to be a critical element moving forward.

Furthermore, the State commitment to promoting technologies to address excess poultry litter is commendable. Notably, USDA-NRCS is currently exploring the concept of a centralized poultry litter storage facility in north central West Virginia. Should this project come to fruition, it would facilitate transporting litter from the Bay watershed to western West Virginia. WV Caltech Energy has also constructed a small-scale gasification unit on a poultry farm in Wadesville, WV. This demonstration project will document the economic viability and feasibility of converting poultry litter into energy using a gasified unit.

Areas for Improvement
Despite the strengths outlined above, overall EPA found serious deficiencies in the agriculture section. Most notably, the WIP lacks a substantive gap-filling strategy with: enforceable or otherwise binding commitments; proposals for increased authorities or resources; and schedules for program-building milestones. In addition, the WIP relies upon existing, largely voluntary conservation programs, with no indication of increasing implementation levels other than increasing conservation tillage to address nitrogen losses from cropland and AFOs. It is not clear whether this practice will be combined with appropriate nutrient management. If it is a stand-alone practice, nitrogen leaching may in fact increase.

Currently, the West Virginia CAFO program has not been approved by EPA. There are several issues that need to be addressed before EPA can issue its final approval. EPA can discuss these items in more detail during follow-up meetings and calls with the state. Furthermore, EPA noted a ten-fold increase in manure transport outside the watershed in the WIP input deck submitted September 3. EPA expects the final WIP document to outline the staff and resource needs as well as the timetable for achieving this increase.

Because contingencies will be voluntary rather than regulatory, EPA needs further assurance that nutrient and sediment reductions through voluntary practices can be relied upon. In addition, EPA needs a detailed strategy to increase farmer participation rates in existing voluntary programs. For example, EPA would like a more detailed explanation of how outreach and education for the Conservation Reserve Program will reach potential land owners.

Finally, EPA would like more detail on the state's efforts to review and update the phosphorus index to ensure that there is no over application of phosphorus beyond plant needs and that soils do not become saturated with phosphorus. EPA requests more information to substantiate West Virginia's claim that the updated phosphorus index will result in further reductions of phosphorus loss to surface waters.

Urban Stormwater: Deficiencies in Gap-Filling Strategies

Strengths
The West Virginia small MS4 permit has a solid performance standard for new and redevelopment. Also, the state has historically placed a strong emphasis on outreach to MS4 communities. EPA hopes that West Virginia can build on these strengths in its final Phase I WIP. The Chesapeake Bay Regulatory and Accountability Program (CBRAP) grant provides an opportunity to fill some of the gaps identified below.

Areas for Improvement
As the WIP points out, the West Virginia panhandle has experienced rapid development in recent years that is expected to continue into the future. Therefore, EPA expects the final WIP to include mechanisms to regulate new or increased discharges from urban lands, particularly those outside existing MS4 jurisdictions. For example, the state might consider incorporating post-construction controls into its Construction General Permit (CGP). This would provide state-wide coverage without the need to use residual designation authority or develop a new permit or program.

EPA encourages West Virginia to adopt a strong retrofit program as a mechanism to reduce loads from existing urban lands. A retrofit program with a performance standard based on stable hydrology will reduce in-stream scouring and, by extension, phosphorus and sediment that impair local as well as regional waters. Many of the practices commonly implemented to meet these performance standards also reduce nitrogen loads. EPA also expects a strong retrofit program to include a reasonably aggressive implementation schedule in order to meet the 2017 and 2025 milestones.

EPA also expects the final WIP to address staffing shortfalls (1 FTE to be increased to 2) that prohibit a meaningful enforcement program. The first MS4 inspection was only completed at the end of August, 2010. The State should consider use of the Chesapeake Bay Regulatory and Accountability Program grant to hire more stormwater staff to fill this key gap.

Wastewater: Serious Deficiencies in Gap-Filling Strategies

Strengths
EPA recognizes that concentration limits of 5.0 mg/l TN and 0.5 mg/l TP for significant wastewater facilities are more stringent than that previously proposed by WV. However, EPA has few options but to propose more strict limits on regulated point sources if numeric gaps and programmatic deficiencies in the WIP are not addressed in the final WIP due November 29. Similar backstopping actions have been proposed in the other states.

Areas for Improvement
EPA is aware that inadequate funding has been a barrier to wastewater treatment plant upgrades in the past. The state needs to provide a strategy to identify the necessary funding sources and/or assuring the enforceable means for plants to meet their permit limits. Several Bay watershed states have taken initiatives in this regard in the past five years.

West Virginia has determined that nitrogen and phosphorus are not pollutants of concern for certain industrial discharges with "negligible loads". All nutrient and sediment loads need to be included in the WIP and TMDL with a mechanism to determine assigned loads or they will receive a zero wasteload allocation.

To meet EPA's expectations for tracking and compliance, DEP needs to input wastewater discharge and compliance schedule information into the Permit Compliance System (PCS). These data will allow EPA to assess whether nutrient reductions are occurring on schedule to meet the 2017 and 2025 targets.

Growth
It is good to see a framework for a water quality trading program, but the WIP needs to provide more information on enforceability, baseline definition, and a schedule with milestones for program development to meet the expectations set forth in Element 3 of the *Guide for EPA's Evaluation of Phase I Watershed Implementation Plans* (distributed April 2, 2010) and Appendix S of the draft TMDL released September 24. EPA also expects additional information on future changes in loads from the agriculture sector. West Virginia's WIP states that agricultural loads are decreasing, but more poultry on less land could result in greater nutrient imbalances.

Section III. Backstop Allocations

In order to meet the 2017 target and 2025 nutrient and sediment allocations, EPA has proposed a high level backstop allocation scenario for West Virginia in the draft Chesapeake Bay TMDL. While EPA remains open to consider all comments and review the final Phase I WIP, unless DEP significantly improves and submits a final Phase I WIP addressing the concerns raised in this evaluation, EPA expects to finalize high level backstop allocations in West Virginia.

High level backstop allocations for West Virginia sources include:

- WWTPs: limit of technology (3 mg/L TN and .1 mg/L TP) and design flow for significant municipal plants
- MS4s: 50% of urban MS4 lands meet aggressive performance standard through retrofit/ redevelopment; 50% of unregulated land treated as regulated, so that 25% of unregulated land meets aggressive performance standard; designation as necessary
- Construction: Erosion and sediment control on all lands subject to Construction General Permit
- CAFO production areas: Waste management, barnyard runoff control, mortality composting. Precision feed management for all animals. Same standards apply to AFOs not subject to CAFO permits except no feed management on dairies; designation as necessary
- Additional reductions from agricultural nonpoint sources necessary to meet July 1 and August 13 nutrient and sediment allocations that EPA will ensure occurs through additional federal backstop actions as necessary

In addition, EPA will establish finer scale wasteload and load allocations at the same level of detail as tidal states in the final TMDL to increase reasonable assurance and to ensure NPDES permits will be consistent with Chesapeake Bay TMDL wasteload allocations. EPA will remove or reduce these backstop actions if West Virginia addresses the deficiencies summarized in this document to EPA's satisfaction.

Section IV: Other Federal Backstop Actions

Pursuant to the December 29, 2009 letter from Regional Administrator Shawn Garvin to the Chesapeake Bay Principals' Staff Committee, EPA may consider applying other federal backstop actions in addition to those listed in Section III to ensure that jurisdictions develop and implement sufficient WIPs and achieve nutrient and sediment load reductions as evidenced through two-year milestones.

Section V: Other Suggested Improvements/Final Comments

In its June 11, 2010 letter to the Principals Staff Committee, EPA indicated that it would include for each jurisdiction a separate Temporary Reserve for both nitrogen and phosphorus for the purposes of WIP development and incorporating contingency actions. The Temporary Reserve

is based on possible changes to nitrogen and phosphorus allocations that could result from two forthcoming model refinements to Phase 5.3 of the Chesapeake Bay Program Watershed Model.

In his July 1 letter to the Principals Staff Committee communicating the major basin and jurisdiction nutrient allocations, EPA Regional Administrator Shawn Garvin announced that this reserve would be 5%. The Regional Administrator explained in that letter that the Agency expects jurisdictions to account for this 5% Temporary Reserve as an element of their contingency actions in their Phase I WIPs, in the event that the 2011 refinements to the Phase 5.3 Chesapeake Bay Watershed Model result in draft allocations lower than those provided on July 1, 2010. EPA expects West Virginia to incorporate this 5% Temporary Reserve into the final Phase I WIP. Depending on the results of the 2011 model refinements, the Temporary Reserve will be revised or removed as appropriate during the 2011 Phase II WIP development process.

EPA also expects the final WIP to identify the load reductions that the West Virginia will achieve in each of its major basins every two years, starting in 2011. As stated in EPA's November 4, 2009 letter to the Chesapeake Bay Program Principals' Staff Committee and the April 2, 2010 *Guide for EPA's Evaluation of Phase I Watershed Implementation Plans*, this schedule is necessary for EPA to assess whether 2-year milestones are on pace to achieve the 2017 and 2025 goals. If this information is not provided, EPA will assume constant, linear nutrient and sediment reductions between 2009, 2017 and 2025, and will assess two-year milestone commitments and progress accordingly.

We look forward to discussing these issues and providing additional suggestions to West Virginia on the September 30 conference call with the WIP Evaluation Team and in future communications.

Section VI: Closing

Thank you again for West Virginia's submission of the draft WIP on September 1, 2010. EPA appreciates West Virginia's interest in working with the Agency to address these deficiencies in advance of the final TMDL. We look forward to the opportunity to work with West Virginia starting September 30 to further explain this feedback and to discuss ideas for strengthening the final Phase I WIP, due November 29, 2010, and the Phase II WIP that will be submitted in 2011. We stand ready to review and process revised WIP scenario runs starting as early as this week.